

=> FILE REG
FILE 'REGISTRY' ENTERED AT 11:15:04 ON 02 FEB 2010
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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=> D HIS

FILE 'HCAPLUS' ENTERED AT 10:56:05 ON 02 FEB 2010
L1 8548 S MORISHITA ?/AU
L2 28162 S NOMURA ?/AU
L3 13783 S TSUDA ?/AU
L4 13 S L1 AND L2 AND L3
SEL L4 6 RN

FILE 'REGISTRY' ENTERED AT 10:57:25 ON 02 FEB 2010
L5 36 S E1-E36
E (C58 H42 B2 N2 O4 . C48 H37 BR2 IR N4 O2 . C18 H24 BR2 O2
L6 1 S E3
E 104692/RID

FILE 'LREGISTRY' ENTERED AT 11:00:13 ON 02 FEB 2010
L7 STR
L8 STR

FILE 'REGISTRY' ENTERED AT 11:05:33 ON 02 FEB 2010
L9 SCR 2043
L10 1 S L7 AND L8 AND L9

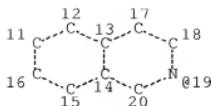
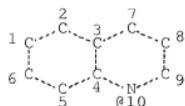
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L11 STR

FILE 'REGISTRY' ENTERED AT 11:12:56 ON 02 FEB 2010
L12 1 S L11 AND L8 AND L9
L13 6 S L11 AND L8 AND L9 FUL
SAV L13 TRU019/A

FILE 'ZCA' ENTERED AT 11:14:38 ON 02 FEB 2010
L14 1 S L13

FILE 'REGISTRY' ENTERED AT 11:15:04 ON 02 FEB 2010

=> D L13 QUE STAT
L8 STR



G1 23

VAR G1=10/19

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

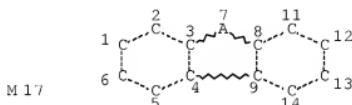
RSPEC I

NUMBER OF NODES IS 21

STEREO ATTRIBUTES: NONE

L9 SCR 2043

L11 STR



NODE ATTRIBUTES:

NSPEC IS R AT 17

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE

L13 6 SEA FILE=REGISTRY SSS FUL L11 AND L8 AND L9

100.0% PROCESSED 4121 ITERATIONS

SEARCH TIME: 00.00.01

6 ANSWERS

=> FILE ZCA

FILE 'ZCA' ENTERED AT 11:15:14 ON 02 FEB 2010

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

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=> D L14 1 ALL HITSTR

L14 ANSWER 1 OF 1 ZCA COPYRIGHT 2010 ACS on STN

AN 142:103420 ZCA Full-text

ED Entered STN: 27 Jan 2005

TI High-molecular copolymer containing metal coordination compound and organic electroluminescence element using the same

IN Morishita, Yoshii; Nomura, Satoyuki; Tsuda, Yoshihiro

PA Hitachi Chemical Co., Ltd., Japan

SO PCT Int. Appl., 167 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

ICM C08G085-00

ICS C08G061-12; C09K011-06; H05B033-14

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38, 78

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004113421	A1	20041229	WO 2004-JP8950	20040618
	JP 2005029782	A	20050203	JP 2004-180126	20040617
	JP 4380430	B2	20091209		
	JP 2005029783	A	20050203	JP 2004-180137	20040617
	JP 4380431	B2	20091209		
	JP 2005029784	A	20050203	JP 2004-180147	20040617
	JP 4380432	B2	20091209		
	JP 2005029785	A	20050203	JP 2004-180158	20040617
	JP 4380433	B2	20091209		
	CN 1805996	A	20060719	CN 2004-80016774	20040618
	KR 2006021894	A	20060308	KR 2005-724010	20051214
	US 20060287498	A1	20061221	US 2005-561019	20051216
PRAI	JP 2003-173799	A	20030618		
	JP 2003-173874	A	20030618		
	JP 2003-173933	A	20030618		
	JP 2003-173986	A	20030618		
	WO 2004-JP8950	W	20040618		

AB The present invention relates to a high-mol. copolymer contg. a metal coordination compd. capable of blue phosphorescence of high color purity. There is further provided a high-mol. copolymer contg. a metal coordination compd. of prolonged driving life capable of emitting lights of various colors ranging from blue to red. There is provided a high-mol. copolymer

contg. a metal coordination compd. comprising any of metal coordination compd. monomer units I-VI and ≥ 1 monomer unit selected from a (un)substituted quinoline monomer unit, a (un)substituted arylene, and/or heteroarylene monomer unit, a (un)substituted branched structure monomer unit, and a (un)substituted conjugated monomer unit, wherein B = N(X7), O, S, C(:O), SO2, or CR2; M = Ir, Rh, Ru, Os, Pd, or Pt; A = a nitrogen-contg. ring compd. bonded to M; X1-7 = independently R1, OR2, SR3, OCOR4, COOR5, SiR6R7R8, or NR9R10; R1-10 = H, halogen atom, cyano, nitro, C1-22 linear or branched (halogenated)alkyl, or (haloagenated) C6-30 aryl, C2-30 heteroaryl, or C7-30 aralkyl group. Thus, 1.9 g magnesium and 30 mmol 3-bromo-9-methylcarbazole were stirred, mixed with 300 mmol trimethylborate, 1,2-ethanediol was added therein, 10 mmol of the resulting carbazole-deriv. borate and 10 mmol 2-bromopyridine were reacted to give 3-(2'-pyridyl)-9-methylcarbazole, 7.58 mmol of which was reacted with 1.7 mmol iridium chloride trihydrate to give di- μ -chloro-tetrakis[3-(2'-pyridyl)-9-methylcarbazole-N1', C2]diiridium, 0.7 mmol of the resulting iridium complex was reacted with 2.10 mmol an acetylacetone deriv. to give bis[3-(2'-pyridyl)-9-methylcarbazole-N1', C2](dibromobenzylacetylacetone)iridium, 1 mmol of which was mixed with dibromodiphenyloxadiazole 9, 2,5-dicyclohexyloxy-1,4-dibromobenzene 5, quinoline-deriv. diborate (prepn. given) 5, and palladium tetratriphenylphosphine 0.2 mmol for 48 h to give a copolymer with electroluminescence at 450 nm when fabricated into an electroluminescent element.

ST high mol copolymer metal coordination compd org electroluminescence; high mol bromomethylcarbazole bromopyridine iridium chloride reactant pyridylmethylcarbazole intermediate; bispyridylmethylcarbazole dibromobenzylacetylacetone iridium dibromodiphenyloxadiazole dicyclohexyloxydibromobenzene quinoline deriv copolymer

IT Coordination compounds
(polymers; prepn. of high-mol. copolymers contg. metal coordination compds. for org. electroluminescent elements)

IT Electroluminescent devices

Phosphorescent substances
(prepn. of high-mol. copolymers contg. metal coordination compds. for org. electroluminescent elements)

IT 809287-10-3P 809287-12-5P 809287-17-0P 809287-19-2P
809287-24-9P 809287-26-1P 810660-43-6P 810660-46-9P
810660-49-2P

(intermediate in monomer prepn.; prepn. of high-mol. copolymers contg. metal coordination compds. for org. electroluminescent elements)

IT 816420-48-1P 816420-50-5P 816420-53-8P 816420-55-0P
816420-67-4P

(monomer; prepn. of high-mol. copolymers contg. metal coordination compds. for org. electroluminescent elements)

IT 816420-58-3P 816420-59-4P 816420-60-7P
816420-63-0P 816420-64-1P 816420-66-3P
816420-68-5P 816420-69-6P 816420-70-9P 816420-73-2P
816420-76-5P 816450-74-5P

(prepn. of high-mol. copolymers contg. metal coordination compds. for org. electroluminescent elements)

IT 107-21-1, 1,2-Ethanediol, reactions 109-04-6, 2-Bromopyridine
121-43-7, Trimethylborate 3096-56-8, 2-Bromo-9-fluorenone
13569-57-8, Iridium trichloride trihydrate 91828-08-9,
3-Bromo-9-methylcarbazole 128424-36-2,
2,5-Dibromo-1,4-dihexyloxybenzene 784163-30-0 809287-14-7
816420-47-0
(reactant in monomer prepn.; prepn. of high-mol. copolymers contg.
metal coordination compds. for org. electroluminescent elements)
OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)
UPOS.G Date last citing reference entered STN: 16 Feb 2009
OS.G CAPLUS 2007:197072
RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE CITED REFERENCES
(1) Canon Inc; WO 0244189 A1 2002 ZCA
(2) Canon Inc; EP 1238981 A2 2002 ZCA
(3) Canon Inc; EP 1348711 A1 2002 ZCA
(4) Canon Inc; CN 1374315 A 2002 ZCA
(5) Canon Inc; AU 200222566 A5 2002
(6) Canon Inc; JP 2002332291 A 2002 ZCA
(7) Canon Inc; US 20030068526 A1 2002
(8) Canon Inc; US 20030068535 A1 2002
(9) Canon Inc; WO 0322908 A1 2003
(10) Canon Inc; US 20030186080 A1 2003 ZCA
(11) Canon Inc; JP 200373480 A 2003
(12) Fuji Photo Film Co Ltd; JP 2002317033 A 2002 ZCA
(13) Lightponik Technology Inc; US 20030129448 A1 2003
IT 816420-58-3P 816420-59-4P 816420-60-7P
816420-63-0P 816420-64-1P 816420-66-3P
(prepn. of high-mol. copolymers contg. metal coordination compds.
for org. electroluminescent elements)

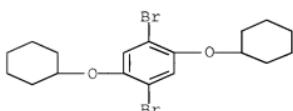
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CN Iridium, [3-[(2,5-dibromophenyl)methyl]-2,4-pentanedionato-
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yl-κC]-, polymer with 2,5-bis(4-bromophenyl)-1,3,4-oxadiazole,
2,2'-bis[4-(1,3,2-dioxaborolan-2-yl)phenyl]-3,3',4,4'-tetraphenyl-6,6'-
biquinoline and 1,4-dibromo-2,5-bis(cyclohexyloxy)benzene (9CI) (CA
INDEX NAME)

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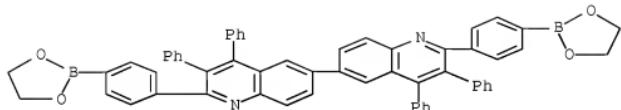
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CMF C18 H24 Br2 O2



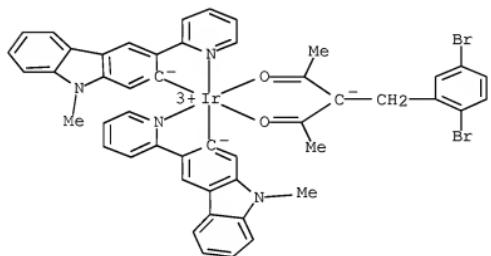
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CRN 816420-55-0
CMF C58 H42 B2 N2 O4



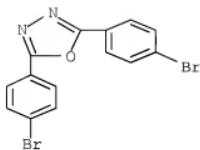
CM 3

CRN 816420-48-1
CMF C48 H37 Br2 Ir N4 O2
CCI CCS



CM 4

CRN 19542-05-3
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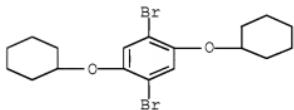


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 κO,κO']bis[7-hydroxy-9-methyl-3-(2-pyridinyl-κN)-9H-
 carbazol-2-yl-κCl]-, polymer with
 2,5-bis(4-bromophenyl)-1,3,4-oxadiazole,
 2,2'-bis[4-(1,3,2-dioxaborolan-2-yl)phenyl]-3,3',4,4'-tetraphenyl-6,6'-
 biquinoline and 1,4-dibromo-2,5-bis(cyclohexyloxy)benzene (9CI) (CA
 INDEX NAME)

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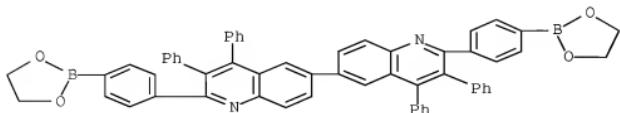
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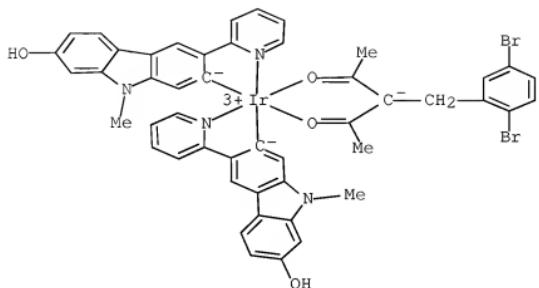
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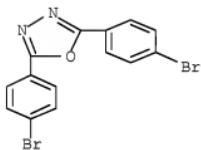
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CRN 816420-50-5
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CCI CCS



CM 4

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CMF C14 H8 Br2 N2 O

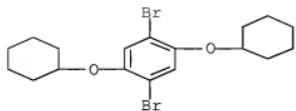


RN 816420-60-7 ZCA

CN Iridium, [3-[(2,5-dibromophenyl)methyl]-2,4-pentanedionato-κO,κN']bis[9-oxo-2-(2-pyridinyl-κN)-9H-fluoren-3-yl-κC]-, polymer with 2,5-bis(4-bromophenyl)-1,3,4-oxadiazole, 2,2'-bis[4-(1,3,2-dioxaborolan-2-yl)phenyl]-3',3',4,4'-tetraphenyl-6,6'-biquinoline and 1,4-dibromo-2,5-bis(cyclohexyloxy)benzene (9CI) (CA INDEX NAME)

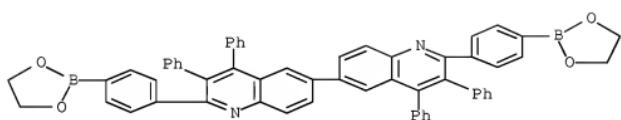
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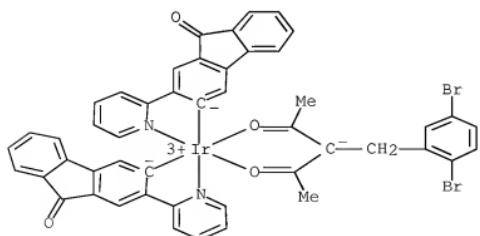
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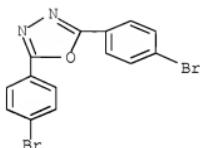
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CCI CCS



CM 4

CRN 19542-05-3

CMF C14 H8 Br2 N2 O



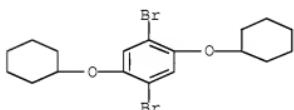
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CN Iridium, [3-[(2,5-dibromophenyl)methyl]-2,4-pentanedionato-
κO,κO']bis[9-methyl-3-(2-pyridinyl-κN)-9H-carbazol-2-
yl-κC], polymer with 2,5-bis(4-bromophenyl)-1,3,4-oxadiazole,
2,2'-bis[4-(1,3,2-dioxaborolan-2-yl)phenyl]-3,3',4,4'-tetraphenyl-6,6'-
biquinoline, 4-bromo-N,N-bis(4-bromophenyl)benzenamine and
1,4-dibromo-2,5-bis(cyclohexyloxy)benzene (9CI) (CA INDEX NAME)

CM 1

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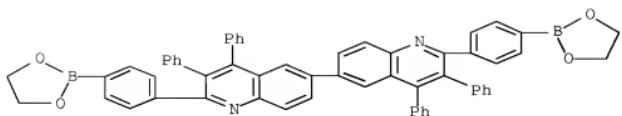
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CM 2

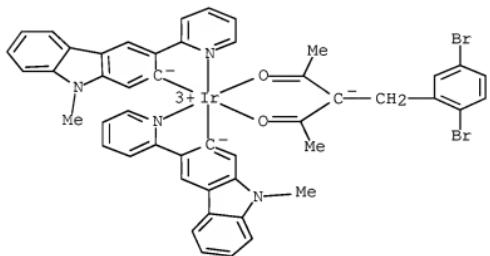
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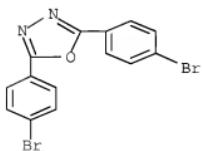
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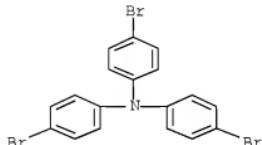
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CM 5

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CMF C18 H12 Br3 N



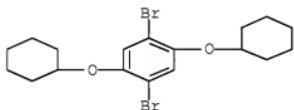
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CN Iridium, [3-[(2,5-dibromophenyl)methyl]-2,4-pentanedionato-
κO,κO']bis[7-hydroxy-9-methyl-3-(2-pyridinyl-κN)-9H-
carbazol-2-yl-κC]-, polymer with
2,5-bis(4-bromophenyl)-1,3,4-oxadiazole,
2,2'-bis[4-(1,3,2-dioxaborolan-2-yl)phenyl]-3,3',4,4'-tetraphenyl-6,6'-
biquinoline, 1,4-dibromo-2,5-bis(cyclohexyloxy)benzene and
1,3,5-tribromobenzene (9CI) (CA INDEX NAME)

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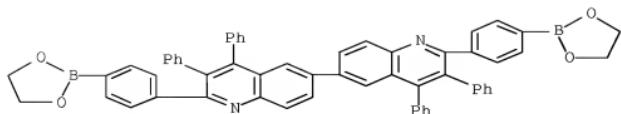
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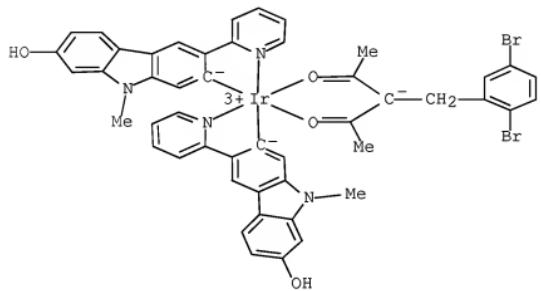
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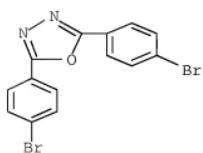
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CCI CCS



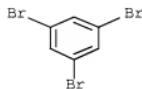
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CM 5

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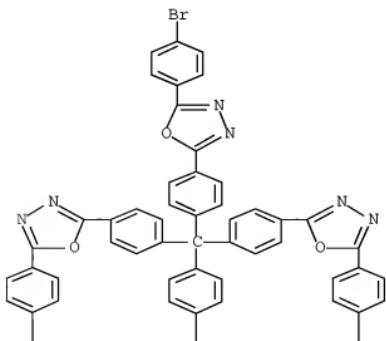


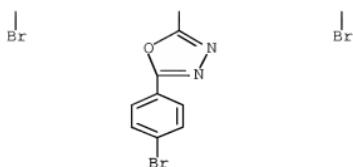
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CN Iridium, [3-[(2,5-dibromophenyl)methyl]-2,4-pentanedionato-
κO,κO']bis[9-oxo-2-(2-pyridinyl-κN)-9H-fluoren-3-yl-
κC]-, polymer with 2,5-bis(4-bromophenyl)-1,3,4-oxadiazole,
2,2'-bis[4-(1,3,2-dioxaborolan-2-yl)phenyl]-3,3',4,4'-tetraphenyl-6,6'-
biquinoline, 1,4-dibromo-2,5-bis(cyclohexyloxy)benzene and
2,2',2'',2'''-(methanetetrayltetra-4,1-phenylene)tetrakis[5-(4-
bromophenyl)-1,3,4-oxadiazole] (9CI) (CA INDEX NAME)

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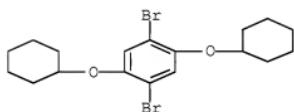
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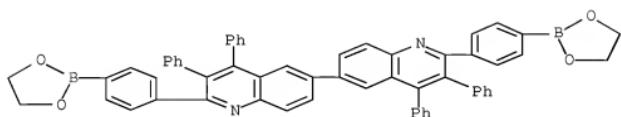
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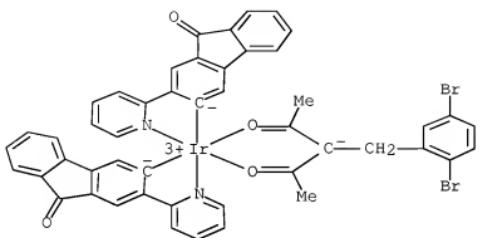
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CM 4

CRN 816420-53-8
CMF C48 H31 Br2 Ir N2 O4
CCI CCS



CM 5

CRN 19542-05-3
CMF C14 H8 Br2 N2 O

